This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claims 1-50** (canceled):

**Claim 51** (previously presented): A multivalent MHC fusion complex comprising two or more linked MHC fusion complexes,

wherein each MHC fusion complex comprises a MHC class II molecule that contains a peptide-biding groove, a presenting peptide covalently linked to an N-terminus of the MHC molecule and effectively positioned in the peptide-binding groove, and a linker sequence interposed between the presenting peptide and the MHC molecule, the fusion complex being capable of increasing or decreasing T cell proliferation or activity, wherein the MHC fusion complex are genetically modified to include a terminal amino acid residue(s) with chemically reactive side chains and the reactive side chains are used to chemically cross-link the MHC fusion complexes.

**Claim 52** (previously added) The multivalent MHC fusion complex of claim 51, wherein the MHC fusion complex does not contain the transmembrane and cytoplasmic domains of the MHC molecule and is linked to an immunoglobulin.

**Claim 53** (previously added) The multivalent MHC fusion complex of claim 52, wherein the immunoglobulin is IgG, IgM or Fab'$_2$.

**Claim 54** (previously added) The multivalent MHC fusion complex of claim 51, wherein two or more of the MHC fusion complexes are chemically cross-linked together or to a suitable particle.

**Claim 55** (canceled).

**Claim 56** (previously presented) The multivalent MHC fusion complex of claim 51 wherein the C terminus of the β chain of MHC fusion complex is genetically modified to include amino acid residue(s) with chemically reactive side chains.

**Claims 57-58** (canceled).

**Claim 59** (previously presented) The multivalent MHC fusion complex of claim 51 wherein two or more of the MHC fusion complexes are chemically cross-linked to a dendrimer particle.

**Claim 60** (previously presented) The multivalent MHC fusion complex of claim 51, wherein each MHC fusion complex therein is the same.

**Claim 61** (previously presented): A multivalent MHC fusion complex comprising two or more linked MHC fusion complexes,

wherein each MHC fusion complex comprises a MHC class II molecule that contains a peptide-biding groove, a presenting peptide covalently linked to an N-terminus of the MHC molecule and effectively positioned in the peptide-binding groove, and a linker sequence interposed between the presenting peptide and the MHC molecule, the fusion complex being capable of increasing or decreasing T cell proliferation or activity, wherein the MHC fusion complex are genetically modified to include a terminal amino acid residue(s) with chemically reactive side chains and the reactive side chains are used to chemically cross-link the MHC fusion complexes and further wherein each MHC fusion complex therein is the same.

**Claim 62** (New) A multivalent MHC fusion complex comprising two or more linked MHC fusion complexes,

wherein each MHC fusion complex comprises a MHC class II molecule that contains a peptide-biding groove, a presenting peptide covalently linked to an N-terminus of the MHC

molecule and effectively positioned in the peptide-binding groove, and a linker sequence interposed between the presenting peptide and the MHC molecule, the fusion complex being capable of increasing or decreasing T cell proliferation or activity, wherein the MHC fusion complex are genetically modified to include a terminal amino acid residue(s) with chemically reactive side chains and the reactive side chains are used to chemically cross-link the MHC fusion complexes and further wherein the amino acid is a Cys or His residue.

**Claim 63** (new): A multivalent MHC fusion complex comprising two or more linked MHC fusion complexes,

wherein each MHC fusion complex comprises a MHC class II molecule that contains a peptide-biding groove, a presenting peptide covalently linked to an N-terminus of the MHC molecule and effectively positioned in the peptide-binding groove, and a linker sequence interposed between the presenting peptide and the MHC molecule, the fusion complex being capable of increasing or decreasing T cell proliferation or activity, wherein the MHC fusion complex are genetically modified to include a terminal amino acid residue(s) with chemically reactive side chains and the reactive side chains are used to chemically cross-link the MHC fusion complexes and further wherein wherein the C terminus of the β chain of MHC fusion complex is genetically modified to include amino acid residue(s) with chemically reactive side chains and the amino acid is a Cys or His residue.